

Remarks/Arguments

1. Claim Rejections - 35 U.S.C. § 112

Claims 8 and 10 stand rejected under 35 U.S.C. § 112 first paragraph on the basis that those skilled in the art would be unfamiliar with the Class I and Class V elements of these claims. Claims 8 and 10 stand rejected under 35 U.S.C. § 112 second paragraph on the basis that these claims are indefinite for failing to particularly point out and distinctly claim the subject matter applicant regards as the invention.

In response, Applicants respectfully disagree that the “class” terminology with regard to explosives is not known to those skilled in the art. For example, in Table II (also in the application as filed) is taken from the military standard MIL-DTL-45444C. A description is clearly presented in the table of these classes and their respective particle sizes and distributions. A copy of Table II is attached herewith for the convenience of the Examiner. It is therefore respectfully requested that the rejection of claims 8 and 10 under the first and second paragraphs of 35 U.S.C. § 112 be reconsidered and removed.

2. Claim Rejections 35 U.S.C. § 102(b) - Wallace, II et al. U.S. Patent No. 5,468,313

Claims 1, 3, and 5-13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wallace II et al., ‘313. Wallace II et al., ‘313 was cited for the proposition that it discloses a shaped charge explosive comprising a bimodal mixture of HMX.

In response, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. Of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).

Claim 1 is being amended with this paper to include the following limitation: “wherein said first quantity of explosive comprises particles having a diameter of about 300 microns and said second quantity of explosive comprises particles having a diameter up to about 7 microns in diameter.” Wallace II et al., ‘313 does not disclose a quantity of explosive having a diameter of about 300 microns mixed with another quantity of explosive having a diameter up to about 7 microns in diameter. Since Wallace II et al., ‘313 does not disclose each and every element of claim 1, it does not anticipate claim 1 and therefore cannot serve as the basis for the rejection of this claim under 35 U.S.C. § 102(b). Since claims 3 and 5-13 all depend from claim 1, either directly or indirectly, the rejection of these claims under 35 U.S.C. § 102(b) based on Wallace II et al., ‘313 should be reconsidered and removed.

3. Claim Rejections 35 U.S.C. § 103(a) - Wallace, II et al. ‘313 and Renfro et al. U.S. Patent No. 6,619,176

Claims 2 and 4 stand rejected under 35 U.S.C. 103(a) as being found unpatentable over Wallace II et al., ‘313 as applied to claims 1, 3, and 5-13 above, and further in view of Renfro et al. ‘176. In response, to sustain a rejection under 35 U.S.C. § 103(a) a prima facie case of obviousness must be established. M.P.E.P. § 2142. To establish a prima facie case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. *Id.* Second, there must be a reasonable expectation of success. *Id.* Finally, the prior art references (or references when combined) must teach or suggest all the claim limitations. *Id.*

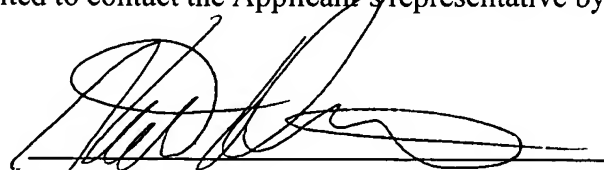
Claims 2 and 4 depend from claim 1, as noted above Wallace II et al., '313 does not teach or suggest all of the elements of that claim, and therefore does not teach or suggest all of the elements of claims 2 or 4. Similarly, Renfro et al. '176 does not teach or suggest all of the elements of these claims. It is therefore respectfully requested that these references be removed as the basis for the rejection of claims 2 and 4.

Conclusion

It is respectfully urged that in light of the above stated amendments and submissions that the claims of the above referenced application are in compliance with the first and second paragraph of 35 U.S.C. § 112. Furthermore, it is urged that applicants' claims are patentable in light of the prior art and that the rejections of claims 1-13 under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a) should be reremoved. It is believed that the foregoing response is full and complete. Applicants respectfully request reconsideration of the instant application in light of the foregoing response and amendments.

Should the Examiner have any questions, comments or suggestions in furtherance of the prosecution of the application, the Examiner is invited to contact the Applicant's representative by telephone or fax.

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MIL-DTL-45444C

Table II. Granulation

Through U.S. Standard Sieve No.	Class 1 Wt. Percent	Class 2 Wt. Percent	Class 3 Wt. Percent	Class 4 Wt. Percent	Class 5 Wt. Percent	Class 6 Wt. Percent
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8				100		
12			99 min ✓	85 min		99 min
35				25 ± 15		
50	90 ± 6	100	40 ± 15			90 min
100	50 ± 10		20 ± 10	15 max		65 ± 15
120		98 min				
200	20 ± 6		10 ± 10			30 ± 15
325	8 ± 5	75 min			98 min	15 ± 10

3.2.2 Use of virgin HMX only. HMX covered by this specification shall consist of virgin HMX only (see 6.7).

3.3 Process controls. The contractor shall submit a Process Control document to the Government specifying the process variables which are considered crucial for the production of HMX. The Process Control Document shall be submitted 30 days prior to commencement of production in accordance with 4.2.

3.4 Workmanship. The manufacturer shall use procedures and controls which assure that the HMX produced does not contain foreign material such as dirt, rust, paint or metal chips, etc., and that the safety and reliability of the explosive are not compromised. Compliance with this requirement shall be as specified in 4.7.9.

3.5 Product certification. No HMX material whether produced for military or commercial use may be represented as meeting the requirements of this detail specification unless it complies with all requirements contained in Section 3. The process control document (see 3.3), test data for first article inspection (see 4.4) and conformance inspection (see 4.5) shall be submitted to the Technical Agency (see 6.9) for evaluation, approval and certification on compliance with MIL-DTL-45444.

4. VERIFICATION

4.1 General provisions. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The government reserves the right to perform any of